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SCOTT SHAOBING CHEN

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* SCOTT SHAOBING CHEN,  
ALAIN CHARLES LOUIS TRITSCHLER,  
and MAHESH VISWANATHAN

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Appeal 2009-003091  
Application 09/345,238  
Technology Center 2600

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Decided: January 15, 2010

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Before KENNETH W. HAIRSTON, CARLA M. KRIVAK, and  
BRADLEY W. BAUMEISTER, *Administrative Patent Judges*.

KRIVAK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from a final rejection of claims 1-35. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse and enter a new ground of rejection pursuant to our authority under 37 C.F.R. § 41.50(b).

## STATEMENT OF THE CASE

Appellants' claimed invention is a method and apparatus for automatically identifying human speakers from an audio or video source (Spec. 2:8-9). Audio information is processed to identify potential segment boundaries corresponding to a change in speaker (Spec. 2:9-10). Identified segments corresponding to the same speaker are clustered, and a cluster identifier is assigned to each detected segment. A cluster output file is generated and provides a sequence of segment numbers and a corresponding cluster number (Spec. 2:10-14). A speaker identification engine or a human may then assign a speaker name to each cluster (Spec. 2:14-15).

Independent claim 1, reproduced below, is representative of the subject matter on appeal.

1. A method for tracking a speaker in an audio source, said method comprising the steps of:

identifying potential segment boundaries in said audio source;  
and

clustering homogeneous segments from said audio source  
substantially concurrently with said identifying step.

## REFERENCES

Kleider                                      US 5,930,748                                      Jul. 27, 1999

Chen, *Speaker, Environment and Channel Change Detection and Clustering via the Bayesian Information Criterion*, DARPA BROADCAST NEWS TRANSCRIPTION AND UNDERSTANDING WORKSHOP, at pp. 1-13 (Feb. 8-11, 1998).

The Examiner rejected claims 1-5, 8, 10-14, 16-19, 21-26, and 28-35 under 35 U.S.C. § 102(b) based upon the teachings of Chen.

The Examiner rejected claims 6, 7, 9, 20, and 27 under 35 U.S.C. § 103(a) based upon the teachings of Chen and well-known prior art.

The Examiner rejected claim 15 under 35 U.S.C. § 103(a) based upon the teachings of Chen and Kleider.

Appellants contend Chen does not teach identifying (segmenting) and clustering are performed “substantially concurrently” as claimed (App. Br. 5; Reply 2-3).<sup>1</sup> Appellants assert Chen teaches an “audio stream is *first* segmented and *then* clustered” (App. Br. 5), which is a sequential operation. We agree with Appellants.

The Examiner finds that Chen teaches all the features of Appellants’ claimed invention (Ans. 3-4). Particularly, the Examiner states the term “substantially concurrently,” given its broadest reasonable interpretation, reads on Chen, which sequentially performs segmenting and clustering (Ans. 11-12). Appellants assert that the Examiner’s interpretation of the term “substantially concurrently” is incorrect. Appellants’ independent claims recite that the steps of identifying and clustering be performed “substantially concurrently” as shown in Fig. 2 and discussed in the specification (App. Br. 7). Appellants assert “substantially” is defined as “to a great extent or degree” and “concurrently” is defined as “overlapping in duration,” therefore, a broad interpretation of this phrase requires there is some overlap between segmenting and clustering (Reply 2). In Appellants’ invention the segments are clustered as they arrive (Spec. 2:16-26; Fig. 2). This is

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<sup>1</sup> This Opinion references the Corrected Appeal Brief filed May 7, 2008 and the Reply Brief filed Sep. 17, 2008.

different from Chen where there is no overlap as all the segments are first collected and then clustered (Chen, Sec. 4; App. Br. 5). The Examiner's interpretation of the term "substantially concurrently" is therefore not consistent with Appellants' claim language.

Because Chen teaches a sequential operation and not a "substantially concurrent" operation, Chen does not anticipate claims 1-5, 8, 10-14, 16-19, 21-26, and 28-30, 32, and 34. Further, since claims 6, 7, 9, 20, and 27 depend from claims 1, 16, and 23, these claims are not obvious over the combination of Chen and the well-known art. Claim 15 is also not obvious over Chen and Kleider, as Kleider does not cure Chen's deficiencies. Claims 31, 33, and 35 are reversed for the reasons discussed infra.

#### NEW GROUNDS OF REJECTION

Pursuant to 37 C.F.R. § 41.50(b), the following new grounds of rejection are entered.

##### *Claims 1, 16, and 23 under 35 U.S.C. § 101*

Claims 1, 16, and 23 are rejected under 35 U.S.C. § 101 as being directed to patent ineligible subject matter. The Federal Circuit has recently clarified the law in the area of patent-eligible subject matter for process claims in *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008) (en banc), *petition for cert. filed*, 77 USLW 3442 (U.S. Jun. 1, 2009) (No. 08-964).

Claim 1 recites a method for tracking a speaker comprising the steps of identifying potential segment boundaries of an audio source and clustering homogenous segments from the audio source substantially concurrently with the identifying step. Claim 1 does not recite a particular machine or apparatus. Thus, claim 1 is broad enough to read on a person

performing this method solely with mental steps or with pen and paper. Therefore, even if claim 1 recites “physical steps,” it is not drawn to patent-eligible subject matter since the claimed process steps are not limited to any machine or apparatus. *See Bilski*, 545 F.3d at 961. Independent claims 16 and 23 are similarly broad and therefore rejected under the same rationale.

*Claims 31, 33, and 35 under 35 U.S.C. § 112, second paragraph*

Claims 31, 33, and 35 are rejected under 35 U.S.C. § 112, ¶ 2 as being indefinite.

Title 35 U.S.C. § 112, ¶ 2 states, “The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.”

The preambles of claims 31, 33, and 35 recite “an article of manufacture,” while the claims’ bodies appear to recite method steps, i.e., “a computer readable medium having computer readable code means embodied thereon, the computer readable code means comprising: a step to identify. . . and a step to cluster. . .” Because claims 31, 33, and 35 each recite both an apparatus and a method of using the apparatus these claims do not apprise a person of ordinary skill in the art of the metes and bounds protected by these claims. For example, a competitor would not be reasonably apprised of whether infringement occurs when the computer readable medium possessing the computer readable code means is purchased, or alternatively whether infringement only occurs later when the code means is executed on a computer. (*See IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377 (CAFC 2005), which states “that reciting both an apparatus and a method of using that apparatus renders a claim indefinite under section 112,

paragraph 2. *Ex parte Lyell*, 17 USPQ2d 1548 (BPAI 1990).” In *Lyell* the Board further noted “the statutory class of invention is important in determining patentability and infringement.” *Id.* at 1550 (citing *In re Kuehl*, 475 F.2d 658, 665 (CCPA 1973); *Providence Rubber Co. v. Goodyear*, 76 U.S. 788, 796(1869)).

For the reasons expressed above, claims 31, 33, and 35 are indefinite. Therefore, the prior art rejection must fall, *pro forma*, because it is based on unsupported speculative assumptions as to the meaning of these claims and does not reflect on the adequacy of the prior art evidence applied. (*See In re Steele*, 305 F.2d 859, 862-63 (CCPA 1962).

#### DECISION

The Examiner erred in rejecting claims 1-35 under 35 U.S.C. §§ 102(b) and 103(a).

New grounds of rejection are entered for claims 1, 16, 23, 31, 33, and 35. Specifically, claims 1, 16, and 23 are rejected under 35 U.S.C. § 101 as being directed to patent ineligible subject matter, and claims 31, 33, and 35 are rejected under 35 U.S.C. § 112, paragraph 2 as being indefinite.

This decision contains new grounds of rejection pursuant to 37 C.F.R. § 41.50(b) (2008). 37 C.F.R. § 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.”

37 C.F.R. § 41.50(b) also provides that Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the Examiner, in which event the proceeding will be remanded to the Examiner. . . .

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

REVERSED  
37 C.F.R. § 41.50(b)

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